

CLAIMS

What is claimed is:

1 1. A method for suppressing or reducing in
2 mammals the physiological effects caused by a drug
3 comprising:
4 administering to a mammal, prior to the
5 administration of the drug, a drug-conjugated
6 immunogen which consists of the drug conjugated to
7 a carrier molecule; and
8 inducing in the recipient the production of
9 anti-drug antibodies
10 wherein said drug is selected from the group consisting
11 of cocaine, cocaine-derivatives, nicotine and anti-
12 neoplastic compounds.

1 2. The method of claim 1 wherein the drug is
2 cocaine or a cocaine-derivative.

1 3. The method of claim 2, wherein the cocaine
2 derivative is benzoylecgonine.

1 4. The method of claim 1, wherein the carrier
2 molecule is selected from the group consisting of
3 albumin, polysaccharide, and lipopolysaccharide.

1 5. The method of claim 4, wherein the
2 polysaccharide is mannan.

1 6. The method of claim 1, wherein the carrier
2 molecule is selected from the group consisting of
3 Diphtheria, Tetanus, Pertussis, poliovirus, Rubella,
4 Mumps, Measles, Hepatitis, Haemophilus, smallpox and
5 varicella-zoster vaccines, or components thereof.

1 7. The method of claim 4, wherein the drug is
2 cocaine or a cocaine-derivative.

1 8. The method of claim 7, wherein the
2 polysaccharide is mannan.

1 9. A method for reducing the toxicity of a drug
2 in mammals comprising:
3 administering to a mammal, prior to the
4 administration of the drug, a drug-conjugated
5 immunogen which consists of the drug conjugated to
6 a carrier molecule; and
7 inducing in the recipient the production of
8 anti-drug antibodies
9 wherein said drug is selected from the group consisting
10 of cocaine, a cocaine-derivative and anti-neoplastic
11 compounds.

1 10. The method of claim 9, wherein the drug is
2 cocaine or a cocaine-derivative.

1 11. The method of claim 8, wherein the cocaine
2 derivative is benzoylecgonine.

1 12. The method of claim 9, wherein the conjugate
2 is administered to the subject by injection, inhalation
3 or orally.

1 13. The method of claim 12, wherein the conjugate
2 is administered by subcutaneous injection.

1 14. The method of claim 9, wherein the carrier
2 molecule is selected from the group consisting of
3 albumin, polysaccharide, lipopolysaccharide or
4 Diphtheria, Tetanus, Pertussis,

5 poliovirus, Rubella, Mumps, Measles, Hepatitis,
6 Haemophilus, smallpox or varicella-zoster vaccine, or
7 components thereof.

1 15. The method of claim 14, wherein the carrier
2 molecule is either mannan or Salmonella typhosa
3 lipopolysaccharide.

1 16. A method for the treatment of drug abuse
2 comprising the steps of:
3 administering to a recipient a controlled
4 substance-carrier conjugated immunogen;
5 inducing in the recipient the production of
6 anti-controlled substance antibodies; and
7 reducing or eliminating:
8 (i) the physiological effect and/or
9 (ii) toxicity
10 of a subsequent intake of controlled substance in the
11 recipient.

1 17. The method of claim 16 wherein the controlled
2 substance-carrier conjugate is a cocaine derivative
3 conjugated to a carrier molecule.

1 18. The method of claim 17 wherein the cocaine
2 derivative is benzoylecgonine.

1 19. The method of claim 16 wherein said
2 therapeutically effective dose is a dose sufficient to
3 generate in the recipient antibodies against a
4 controlled substance.

1 20. The method of claim 16, wherein the carrier
2 molecule is selected from the group consisting of
3 albumin, polysaccharide, lipopolysaccharide or

- 4 Diphtheria, Tetanus, Pertussis, poliovirus, Rubella,
- 5 Mumps, Measles, Hepatitis, Haemophilus, smallpox or
- 6 varicella-zoster vaccine, or components thereof.